

FCC AND ISED CERTIFICATION TEST REPORT

Applicant:	Clear Touch Interactive Inc
Address:	1100 Thousand Oaks Blvd, Greenville, SC 29607, United States
Manufacturer:	Clear Touch Interactive Inc
Address:	1100 Thousand Oaks Blvd, Greenville, SC 29607, United States
Product Description:	Command Studio Digital Console
Brand Name:	Clear Touch
Tested Model:	CTI-CMST01-SCRN
FCC ID:	2AL27-CMSTSCRN
IC:	22693-CMSTSCRN
Report No.:	JCF250916081-004
Received Date:	Sep. 22, 2025
Tested Date:	Sep. 22, 2025 - Dec. 18, 2025
Issued Date:	Dec. 18, 2025
Test Standards:	FCC Rules and Regulations Part 15 Subpart E, RSS-247 Issue 3 August 2023
Test Procedure:	ANSI C63.10-2020/Cor1-2023, 789033 D02 General U-NII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01, RSS-Gen Issue 5 A2, Feb. 2021
Test Result:	Pass
Prepared By:	
	
<u>Kennys Zhang/Engineer</u> Date: Dec. 18, 2025	
Reviewed By:	
	
<u>Roger Li/Engineer</u> Date: NDec. 18, 2025	
Approved By:	
	
<u>Talent Zhang/Engineer</u> Date: Dec. 18, 2025	

Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of Guangzhou Jingce Testing Technology Co., Ltd. the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Dec. 18, 2025	Original Report	/

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1. Test Report Declare

Applicant:	Clear Touch Interactive Inc
Address:	1100 Thousand Oaks Blvd, Greenville, SC 29607, United States
Manufacturer:	Clear Touch Interactive Inc
Address:	1100 Thousand Oaks Blvd, Greenville, SC 29607, United States
Product Name:	Command Studio Digital Console
Brand Name:	Clear Touch
Model Name:	CTI-CMST01-SCRN
Difference Description:	N/A

We Declare:

The equipment described above is tested by Guangzhou Jingce Testing Technology Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangzhou Jingce Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests except as provided information by clients.

2. Summary of test results

The EUT have been tested according to the applicable standards as referenced below.

Clause	Description of Test Item	Standard	Verdict
1	6/26dB Bandwidth	FCC 15.407 (a)&(e) RSS-247 Clause 6.2	Pass
2	99% Occupied Bandwidth	RSS-Gen Clause 6.6	Pass
3	Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	Pass
4	Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	Pass
5	Frequency Stability Measurement	FCC 15.407 (g)	Pass
6	Radiated Band edge and Spurious Emission	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	Pass
7	Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	Pass
8	Antenna requirement	FCC 15.203 RSS-GEN Clause 8.3	Pass
9	Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.3	Pass

Note: This module is only connected to the matching equipment and other devices cannot exchange data with it.

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.10, Hefeng No.1 street, Huangpu District, Guangzhou, Guangdong, People's Republic of China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.03

FCC Designation Number: CN1381. Test Firm Registration Number: 486550

IC Test Firm Registration Number: 31808

Conformity Assessment Body identifier: CN0173

4. Equipment Under Test

4.1. Description of EUT

EUT Name:	Command Studio Digital Console
Model Number:	CTI-CMST01-SCRN
EUT Function Description:	Please refer to user manual of this device
Power Supply:	Input: 24V $\rightleftharpoons$ 4A
Sample No.:	250916081-01-01
Hardware Version:	N/A
Software Version:	N/A
Radio Specification:	IEEE 802.11a/n
Operation Frequency:	IEEE 802.11a: 5180MHz—5825MHz IEEE 802.11n HT20: 5180MHz—5825MHz IEEE 802.11n HT40: 5190MHz—5795MHz
Modulation:	IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Type:	External Antenna, MAX. Gain: 6.42 dBi External Antenna, MAX. Directional Gain: 9.43 dBi

Note 1: EUT is the ab. of equipment under test.

Note 2: The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

4.2. Channel List

UNII-1 (For Bandwidth = 20 MHz)		UNII-1 (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	/	/
48	5240	/	/

UNII-2A (For Bandwidth = 20 MHz)		UNII-2A (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270
56	5280	62	5310
60	5300	/	/
64	5320	/	/

UNII-2C (For Bandwidth = 20 MHz)		UNII-2C (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510
104	5520	110	5550
108	5540	118	5590
112	5560	126	5630

116	5580	134	5670
120	5600	142	5710
124	5620	/	/
128	5640	/	/
132	5660	/	/
136	5680	/	/
140	5700	/	/
144	5720	/	/

UNII-3 (For Bandwidth = 20 MHz)		UNII-3 (For Bandwidth = 40 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755
153	5765	159	5795
157	5785	/	/
161	5805	/	/
165	5825	/	/

4.3. Test Channel Configuration

Mode	Data rate (Mbps) (see Note)	Test Channel and Frequency
802.11a TX Mode	6	CH36, 5180
	6	CH44, 5220
	6	CH48, 5240
	6	CH52, 5260
	6	CH60, 5300
	6	CH64, 5320
	6	CH100, 5500
	6	CH116, 5580
	6	CH140, 5700
	6	CH144, 5720
	6	CH149, 5745
	6	CH157, 5785
	6	CH165, 5825
802.11n HT20 TX Mode	MCS 8	CH36, 5180
	MCS 8	CH44, 5220
	MCS 8	CH48, 5240
	MCS 8	CH52, 5260
	MCS 8	CH60, 5300
	MCS 8	CH64, 5320
	MCS 8	CH100, 5500
	MCS 8	CH116, 5580

	MCS 8	CH140, 5700
	MCS 8	CH144, 5720
	MCS 8	CH149, 5745
	MCS 8	CH157, 5785
	MCS 8	CH165, 5825
802.11n HT40 TX Mode	MCS 8	CH38, 5190
	MCS 8	CH46, 5230
	MCS 8	CH54, 5270
	MCS 8	CH62, 5310
	MCS 8	CH102, 5510
	MCS 8	CH110, 5550
	MCS 8	CH134, 5670
	MCS 8	CH142, 5710
	MCS 8	CH151, 5755
	MCS 8	CH159, 5795
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.		

4.4. Test Environment Conditions

During the measurement the environmental conditions were within the listed ranges:

	Normal Conditions	Extreme Conditions
Temperature range	21-25 °C	0 °C to +40 °C
Humidity range	40-75%	N/A
Pressure range	86-106 kPa	N/A
Power supply	DC 24V	N/A

Note: The Extreme temperature range and extreme voltages are declared by the manufacturer.

4.5. The Worse Case Power Setting Parameter

The Worse Case Power Setting Parameter			
Test Software	artgui		
Mode	Channel	Soft set value	
		ANT0	ANT1
802.11a	36	1	1
	44	1	1
	48	1	1
	52	1	1
	60	1	1
	64	1	1
	100	1	1
	116	0	0
	140	10	1
	144	1	1
	144	1	1

	149	0	0
	157	0	0
	165	0	0
802.11n HT20	36	2	2
	44	2	2
	48	2	2
	52	2	2
	60	2	2
	64	1	1
	100	1	1
	116	0	0
	140	5	5
	144	1	1
	144	1	1
	149	0	0
	157	0	0
	165	0	0
802.11n HT40	38	1	1
	46	1	1
	54	1	1
	62	1	1
	102	1	1
	110	1	1
	134	5	5
	142	1	1
	142	1	1
	151	0	0
	159	0	0

4.6. Description of Available Antennas

Test Mode	Transmit and Receive Mode	Description
802.11a	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11n HT20	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.
802.11n HT40	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.

5. Description of Test Setup

5.1. Accessory

Description of Accessories	Manufacturer	Model Number	Description	Remark
Adapter	Gangqi	GQ120A-2400400-E1	/	/

5.2. Support Equipment

Equipment	Brand Name	Model Name	P/N
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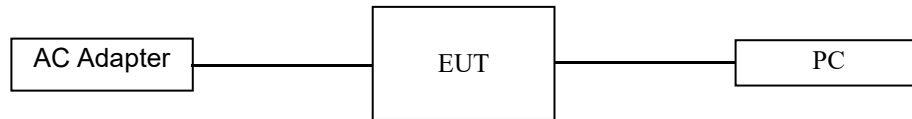
PC	Lenovo	T480	/
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5.3. Test Setup

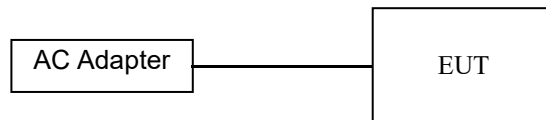
The EUT can work in Fixed Frequency mode.

5.4. Setup Diagram for Tests

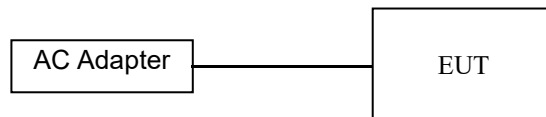
RF Connect Test:



Radiated Emission Test:



AC Power Line Conducted Emissions Test:



6. Measurement uncertainty

Test Item	Uncertainty
AC Power Conduction emission	1.37 dB
All Radiated emissions	5.4dB
Conducted emissions	3.09 dB
Occupied Channel Bandwidth	1.1%
Conducted Output power	0.82dB
Power Spectral Density	0.82dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k = 2.	

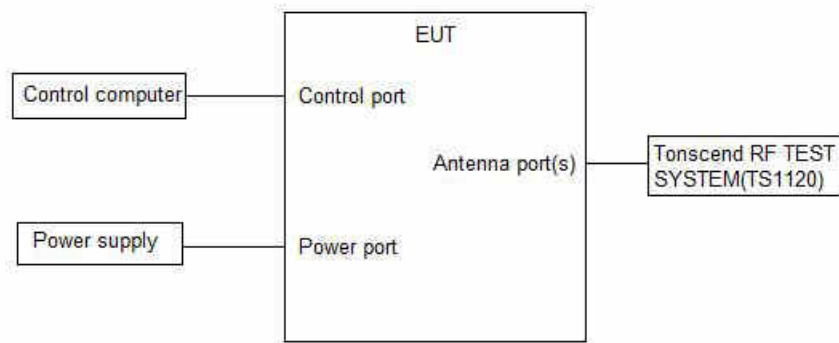
7. Measuring Instrument and Software Used

TS Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Spectrum Analyzer	Keysight	N9030B	MY56320512	Jul. 31, 2025	Jul. 30, 2026
☒	Vector Signal Generator	Keysight	N5182B	MY57300334	Jul. 31, 2025	Jul. 30, 2026
☒	Signal Generator	Keysight	N5171B	MY57280639	Jul. 31, 2025	Jul. 30, 2026
☒	DC POWER	Keysight	E342A	MY59020356	Jul. 31, 2025	Jul. 30, 2026
☒	Incubator thermometer	GWS	EL-02JA	21107288	Jul. 31, 2025	Jul. 30, 2026
☒	Control unit(Power sensor)	Tonscend	JS0806-2	/	Jul. 31, 2025	Jul. 30, 2026
☒	Spectrum Analyzer	Keysight	N9020B	MY60112206	Aug. 29, 2025	Aug. 28, 2025
☒	Control unit(Power sensor)	Tonscend	JS0806-2	21H8060465	Aug. 01, 2025	Jul. 31, 2026
☒	Spectrum Analyzer	Keysight	N9020B	MY60112811	Jul. 31, 2025	Jul. 30, 2026
☒	Signal Generator	Keysight	N5173B	MY62220145	Jul. 31, 2025	Jul. 30, 2026
☒	Vector Signal Generator	Keysight	N5182B	MY61252859	Jul. 31, 2025	Jul. 30, 2026
☒	DC POWER	Keysight	E3642A	MY40005294	Jul. 31, 2025	Jul. 30, 2026
☒	Control unit(Power sensor)	Tonscend	JS0806-2	24F80620865	Aug. 01, 2025	Jul. 31, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	JS1120-3		V3.3.10	
RSE Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	EMI Receiver	R&S	ESR26	101424	Sep. 14, 2024	Feb. 25, 2026
☒	Hybrid Antenna	Schwarzbeck	VULB9163	01361	Sep. 25, 2024	May. 27, 2026
☒	Horn Antenna 1	Schwarzbeck	BBHA 9120 D	02910	Sep. 11, 2024	Aug. 30, 2026
☒	Horn Antenna 2	ETS	BBHA 9170	1090	Sep. 11, 2024	Aug. 30, 2026
☒	loop-antenna	Schwarzbeck	FMZB 1513-60	00030	Jan. 12, 2025	Jan. 11, 2026
☒	Test path	/	Path3: WIFI-5.1G 1-6.5GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path4: WIFI-5.4G 1-6.5GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path5: WIFI-5.8G 1-6.5GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path7: ALL PASS 1-18GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path10:	/	Jul. 31, 2025	Jul. 30, 2026

			6.5GHz High PASS 6.5-18GHz			
☑	Test path	/	Path16: 30MHz-1GHz ALL PASS NO AMP	/	Jul. 31, 2025	Jul. 30, 2026
☑	Signal Pre-Amplifier	ETS	3116C-PA	00217677	Aug. 31, 2025	Aug. 30, 2026
☑	3m Fully-anechoic Chamber	YIHENG	9m*6m*6m	001	Sep. 05, 2023	Sep. 04, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☑	Test software	Tonscend	TS+		V5.0.0.0	
Conducted Emission Test For AC Power Port						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☑	LISN	R&S	ENV216	102509	Aug. 01, 2025	Jul. 31, 2026
☑	EMI Receiver	R&S	ESR	102154	Aug. 01, 2025	Jul. 31, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☑	Test software	EZ	EZ-EMC		EMEC-3A1	
Other Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☑	Temperature & Humidity	Temperature	HTC-1	/	Sep. 20, 2025	Sep. 21, 2026

8. Duty Cycle

8.1. Block Diagram of Test Setup



8.2. Limits

None; for reporting purposes only.

8.3. Procedure

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.B.

The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set RBW $\geq$ EBW if possible; otherwise,

set RBW to the largest available value. Set VBW $\geq$ RBW.

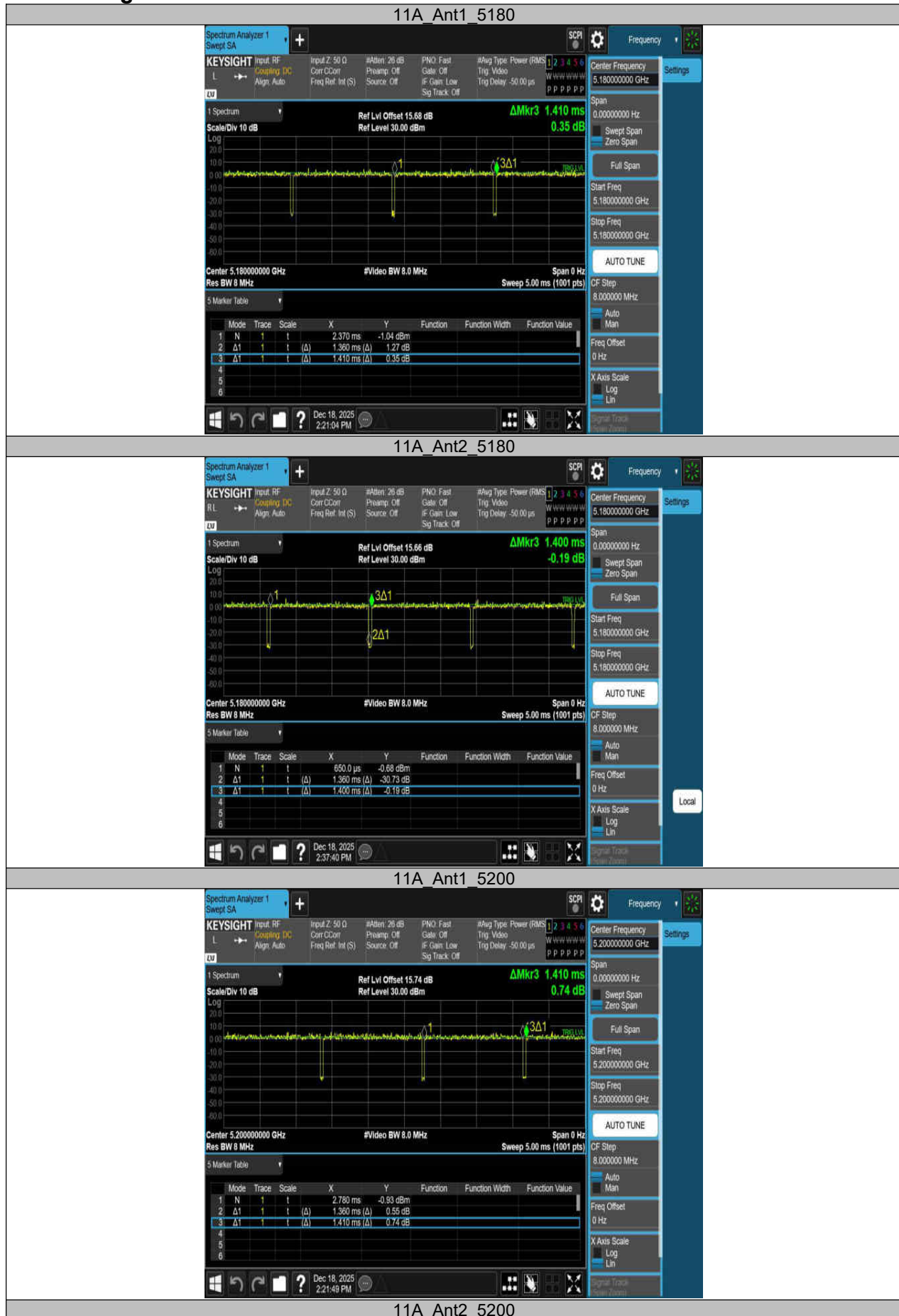
Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

8.4. Results

Test Mode	Ant.	Freq. (MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)
11A	Ant1	5180	1.36	1.41	96.45
	Ant2	5180	1.36	1.40	97.14
	Ant1	5200	1.36	1.41	96.45
	Ant2	5200	1.36	1.41	96.45
	Ant1	5240	1.36	1.41	96.45
	Ant2	5240	1.36	1.40	97.14
	Ant1	5260	1.36	1.40	97.14
	Ant2	5260	1.36	1.40	97.14
	Ant1	5280	1.36	1.41	96.45
	Ant2	5280	1.36	1.41	96.45
	Ant1	5320	1.35	1.40	96.43
	Ant2	5320	1.36	1.40	97.14
	Ant1	5500	1.36	1.40	97.14
	Ant2	5500	1.36	1.40	97.14
	Ant1	5580	1.36	1.40	97.14
	Ant2	5580	1.36	1.41	96.45
	Ant1	5700	1.36	1.40	97.14
	Ant2	5700	1.36	1.40	97.14
	Ant1	5720	1.36	1.41	96.45
	Ant2	5720	1.36	1.40	97.14
	Ant1	5745	1.36	1.40	97.14
	Ant2	5745	1.36	1.40	97.14
	Ant1	5785	1.36	1.40	97.14
	Ant2	5785	1.36	1.40	97.14
	Ant1	5825	1.36	1.41	96.45

	Ant2	5825	1.36	1.40	97.14
11N20MIMO	Ant1	5180	1.27	1.32	96.21
	Ant2	5180	1.27	1.32	96.21
	Ant1	5200	1.27	1.32	96.21
	Ant2	5200	1.27	1.32	96.21
	Ant1	5240	1.27	1.31	96.95
	Ant2	5240	1.27	1.31	96.95
	Ant1	5260	1.27	1.31	96.95
	Ant2	5260	1.27	1.32	96.21
	Ant1	5280	1.27	1.31	96.95
	Ant2	5280	1.27	1.32	96.21
	Ant1	5320	1.27	1.31	96.95
	Ant2	5320	1.27	1.32	96.21
	Ant1	5500	1.27	1.32	96.21
	Ant2	5500	1.27	1.32	96.21
	Ant1	5580	1.27	1.31	96.95
	Ant2	5580	1.27	1.32	96.21
	Ant1	5700	1.27	1.31	96.95
	Ant2	5700	1.27	1.32	96.21
	Ant1	5720	1.27	1.31	96.95
	Ant2	5720	1.27	1.32	96.21
	Ant1	5745	1.27	1.32	96.21
	Ant2	5745	1.27	1.31	96.95
	Ant1	5785	1.27	1.32	96.21
	Ant2	5785	1.27	1.31	96.95
	Ant1	5825	1.27	1.31	96.95
	Ant2	5825	1.27	1.31	96.95
11N40MIMO	Ant1	5190	0.63	0.66	95.45
	Ant2	5190	0.63	0.66	95.45
	Ant1	5230	0.63	0.67	94.03
	Ant2	5230	0.63	0.67	94.03
	Ant1	5270	0.63	0.67	94.03
	Ant2	5270	0.63	0.67	94.03
	Ant1	5310	0.63	0.66	95.45
	Ant2	5310	0.63	0.66	95.45
	Ant1	5510	0.63	0.67	94.03
	Ant2	5510	0.63	0.66	95.45
	Ant1	5550	0.63	0.67	94.03
	Ant2	5550	0.63	0.67	94.03
	Ant1	5670	0.63	0.67	94.03
	Ant2	5670	0.63	0.67	94.03
	Ant1	5710	0.63	0.66	95.45
	Ant2	5710	0.63	0.66	95.45
	Ant1	5755	0.63	0.66	95.45
	Ant2	5755	0.63	0.66	95.45
	Ant1	5795	0.63	0.66	95.45
	Ant2	5795	0.63	0.66	95.45

8.5. Original Test Data





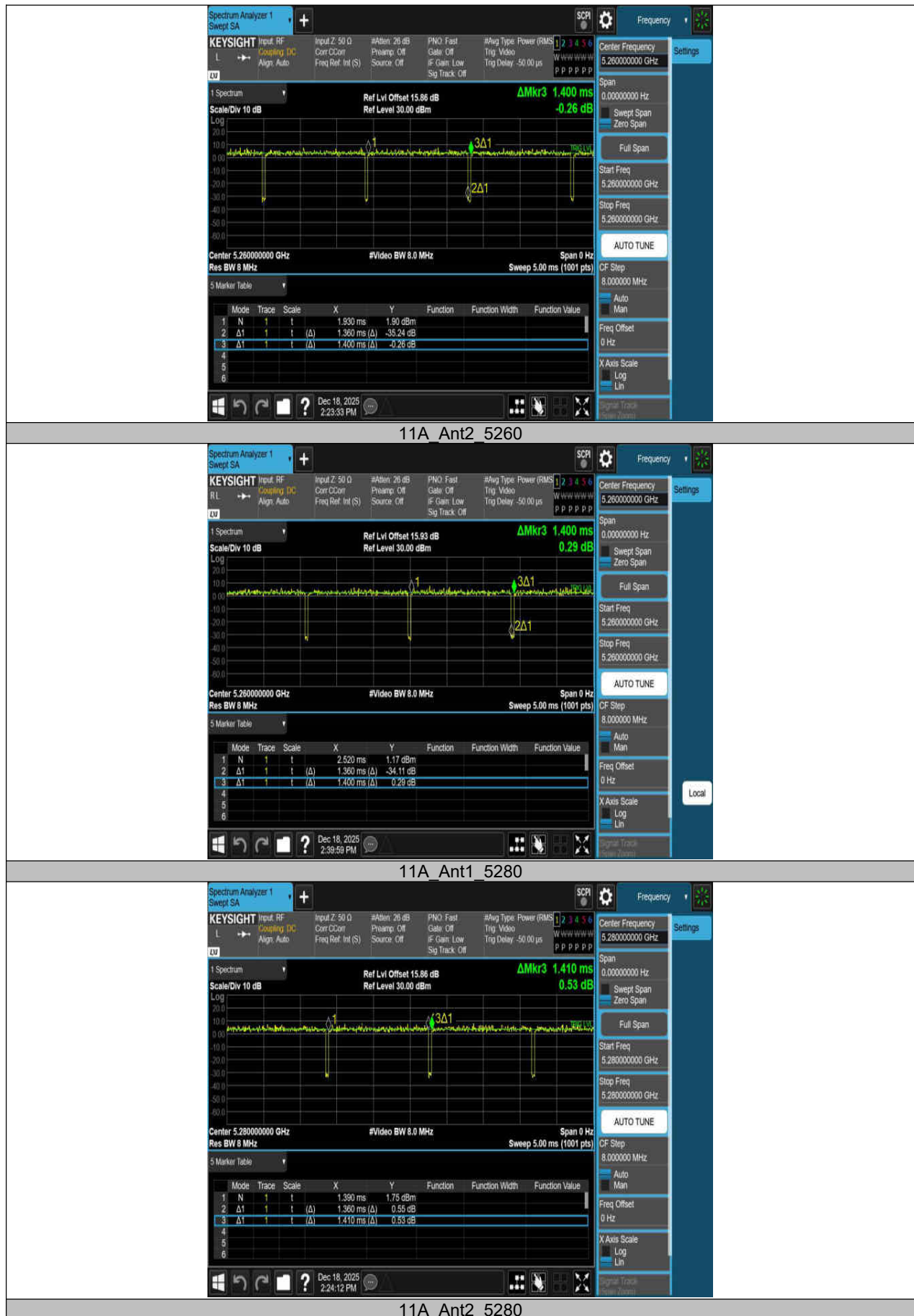
11A Ant1 5240



11A Ant2 5240



11A Ant1 5260







11A Ant2 5500

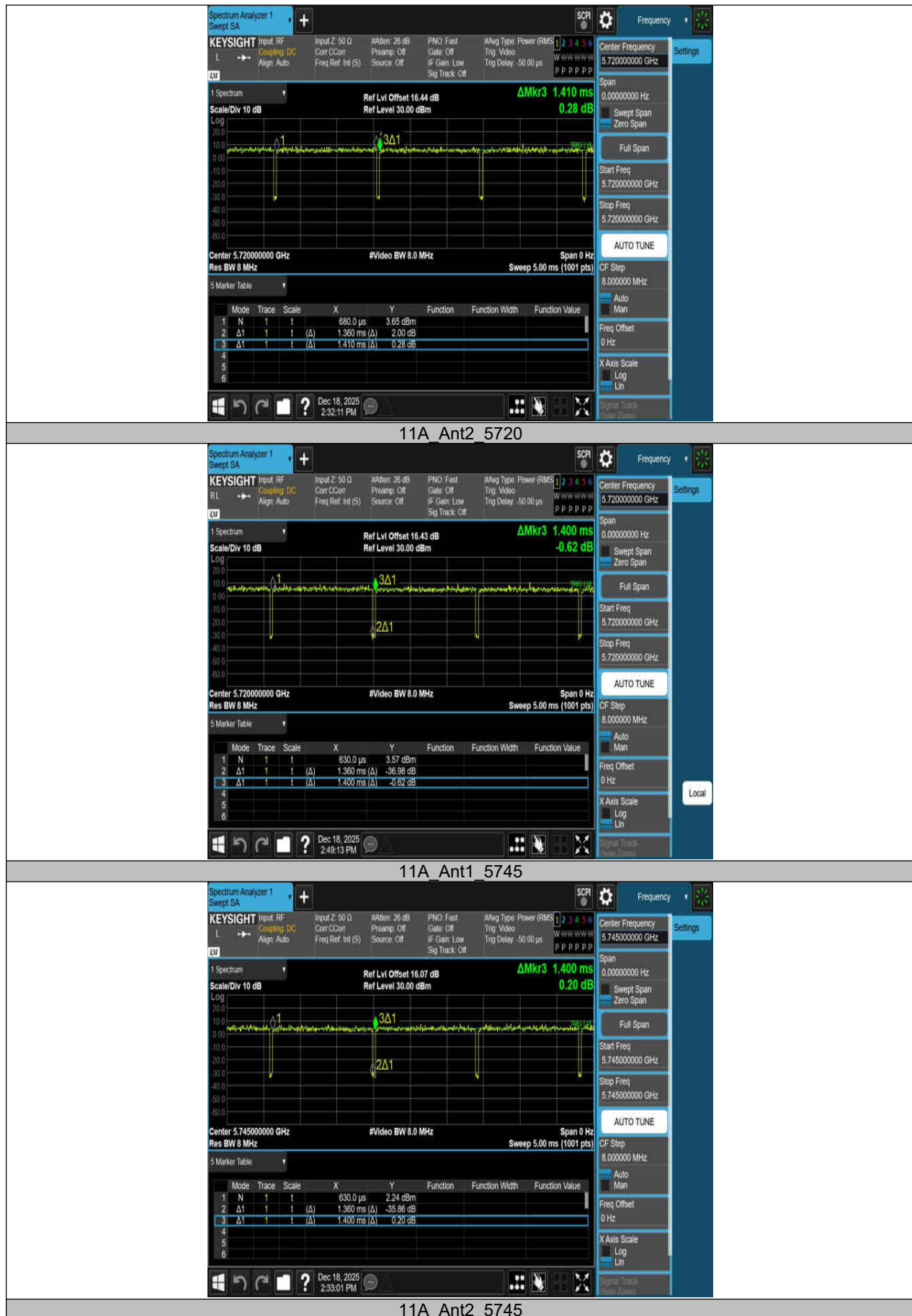


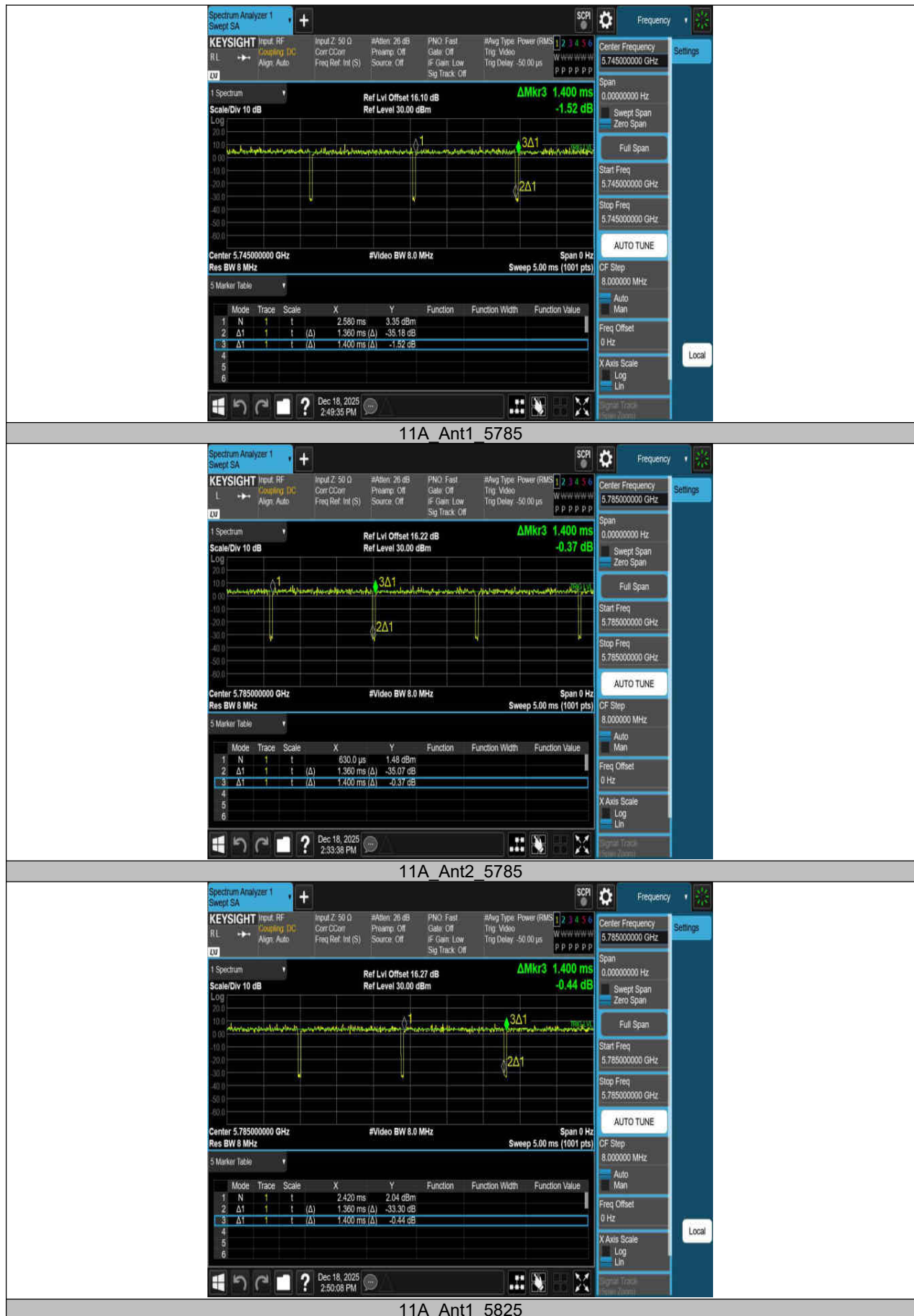
11A Ant1 5580



11A Ant2 5580



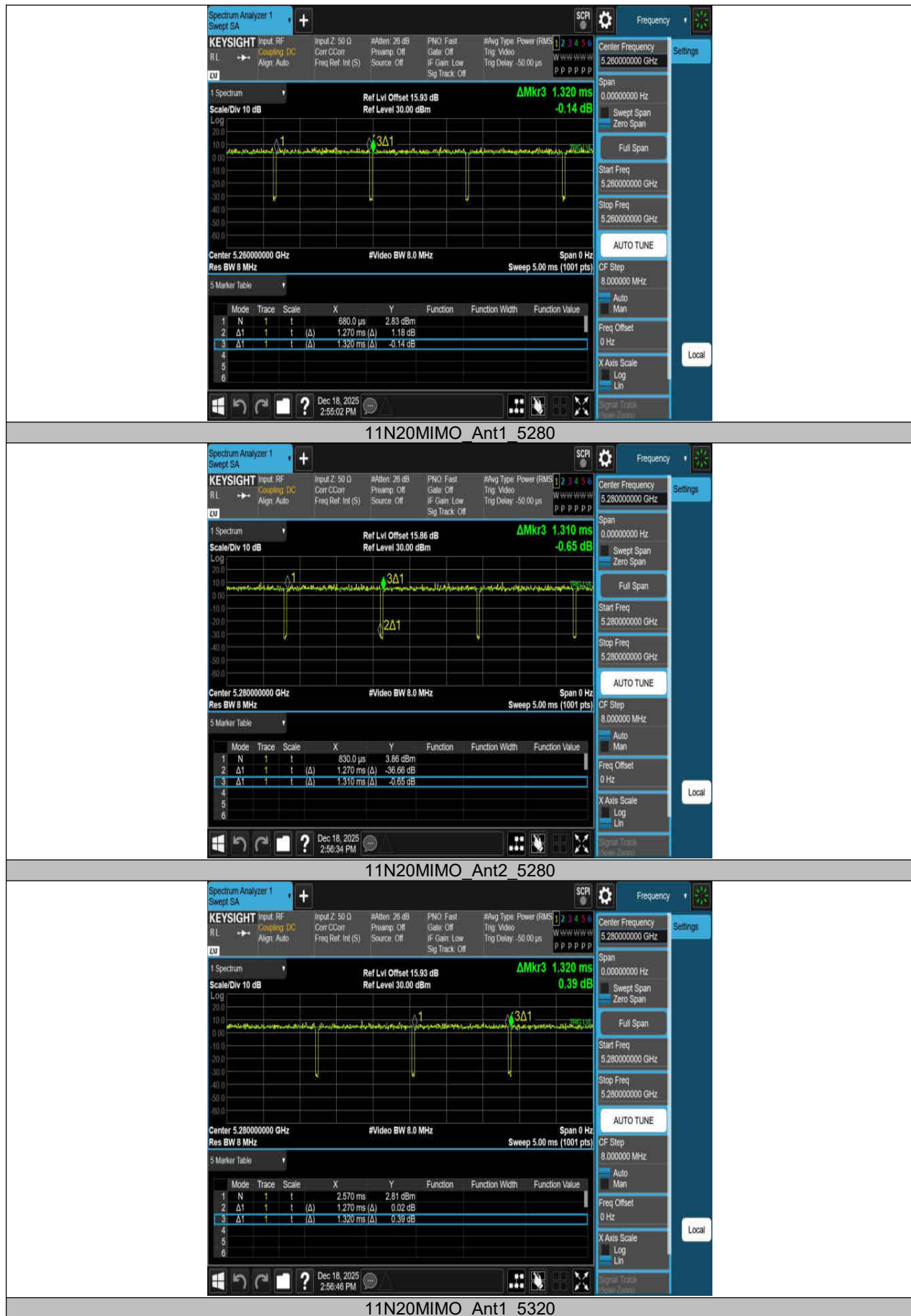














11N20MIMO Ant2 5320



11N20MIMO_Ant1_5500



11N20MIMO Ant2 5500



